REMARKS

Response to Double Patenting Rejection

As noted above and regarding paragraphs 2-5 of the Office Action, Applicants have

Applicants have included a terminal disclaimer in compliance with 37 CR 1.131(c) and a

Declaration of Common Ownership in Appendix A, in addition to a fee set forth in 37

CFR 1.20(d) to overcome the rejection based on nonstatutory double patenting.

Response to Claim Objection

The use of template value objected to by the Office with regard to claim 17 is

illustrated in FIG. 34 and FIG. 36, as filed, and is discussed in relation to the description

of FIG. 34. The template value shown in FIG 34. and FIG. 36 is a mechanism for

designating a particular template to be used with a particular driver for keyword

substitution of virtual keys. The last paragraph on page 37 of the specification has been

amended to clarify the use of template value shown in FIG. 34 and FIG. 36. No new

matter has been added by this clarification.

Response to Claim Rejections Under 35 U.S.C. § 103(a)

The Office bears the initial burden of establishing a *prima facie* case of obviousness.

See In re Piasecki, 223 USPQ785, 788 (Fed. Cir. 1984). To establish a *prima facie*

case of obviousness, three basic criteria must be met. First, there must be some

suggestion or motivation, either in the references themselves or in the knowledge

generally available to one of ordinary skill in the art, to modify the references or to

combine reference teachings. Second, there must be a reasonable expectation of

success. Finally, the prior art reference (or references when combined) must teach or

suggest all claim limitations. The teaching or suggestion to make the claimed

combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991), MPEP § 2142 and § 2143.

Applicants have amended independent claims 1, 28 and 45 to overcome the rejections under 35 U.S.C. § 103(a) presented by the Office.

Claims 1-24, 27-41 and 44-47

The Office has rejected Claims 1-24, 27-41 and 44-47 under 35 U.S.C. §103 (a) as being unpatentable over Liddy et al. (U.S. Patent No. 5,963,940), and further in view of Stellwagen, Jr. (U.S. Patent No. 5,835,755).

Independent Claims 1, 28 and 45

First Claim Limitation: Turning to the first limitation of applicants' independent claim 1, as amended, and similar independent claims 28 and 45, as amended, which recite, "persisting user defined functions and configuration files for a similarity search server in one or more remote database management systems". There is no teaching in Liddy or Stellwagen of persisting user defined functions and configuration files in remote database management systems.

Consider the first limitation of applicants' independent claims and the Office citation of col. 15, lines 8-22 in Liddy, which teaches logistic regression formulas, least squares fit (probability functions) that use Assigning Tags, Document Aspects Vocabulary and Aspects Probability Matrix as inputs to determine a normalized processing score between 0 and 1. There is no relevance between this citation and applicants' claims 1, 28 and 45, and there is no relationship of these probability functions to user defined

functions in applicants' disclosure. There is no teaching in this citation of the first limitation of applicants' claims 1, 28 and 45.

Consider the first limitation of applicants' independent claims and the Office citation of col. 21, line 25 to col. 22, line 7 in Liddy, which teaches a document matcher that uses evidence sources for determining similarity of documents, such as Complex Nominals, Proper Nouns, Subject Field Codes, etc. Five sources of evidence are used to compute five individual measures of similarity (scores) between a query and a document, and the five scores are combined to form a single relevance score. The five sources of evidence used to determine a similarity score include Positive Quorum, Positive Term, Positive Text Structure, Positive Paragraph Matching, and Subject Field Code. There is no relevance between this citation and applicants' claims 1, 28 and 45, and there is no relationship of these functions to user defined functions in applicants' disclosure. The passage cited by the Office does not teach the first claim limitation of applicants' claims 1, 28 and 45.

Consider the first limitation of applicants' independent claims and the Office citation of col. 25, line 17 to col. 26, line 42 in Liddy, which teaches clustering documents using an agglomerative algorithm that compares all document vectors and creates clusters of documents with similarly weighted vectors. There is no relevance between this citation and applicants' claims 1, 28 and 45. There is no teaching in this citation of the first limitation of applicants' claims 1, 28 and 45.

Consider the first limitation of applicants' independent claims and the Office citation of col. 5, lines 22-54 in Liddy, which teaches the hardware configuration of FIG. 1 of the cited Liddy reference. This citation contains no teaching of persisting user defined

functions and configuration files for a similarity search server in one or more remote database management systems. Similarly in col. 21, line 25 to col. 22, line 49 of the Liddy reference discussed above, there is no teaching in this citation of persisting user defined functions and configuration files for a similarity search server in one or more remote database management systems.

Second Claim Limitation: Turning to the second limitation of applicants' independent claim 1, as amended, and similar independent claims 28 and 45, as amended, which recite, "receiving a request by the similarity search server from one or more clients for initiating a similarity search, the request designating an anchor document and at least one search document". There is no teaching in Liddy or Stellwagen of receiving a request by the similarity search server from one or more clients designating an anchor document and at least one search document for initiating a similarity search.

Consider the second limitation of applicants' independent claims and the Office citation of col. 10, lines 3-15 of Liddy, which describe words having multiple meanings that are disambiguated to a single field code using Local Context, Domain Knowledge and Global Knowledge. There is no relevance between this citation and applicants' claims 1, 28 and 45. There is no teaching in this citation of the second limitation of applicants' claims 1, 28 and 45.

Consider the second limitation of applicants' independent claims and the Office citation of col. 27, line 59 to col. 28, line 15 of Liddy, which describe GUI interaction with reference to FIG. 9A and FIG. 9B, in relation to language retrieval systems. There is no relevance between this citation and applicants' claims 1, 28 and 45. There is no teaching in this citation of the second limitation of applicants' claims 1, 28 and 45.

Consider the second limitation of applicants' independent claims and the Office

citation of col. 30, lines 3-31 of Liddy, which teaches some of the elements required

when processing natural language textual documents, but bears no relevance to

applicants' claims 1, 28 and 45. There is no teaching in this citation of the second

limitation of applicants' claims 1, 28 and 45.

Third Claim Limitation: Turning to the third limitation of applicants' independent

claim 1, as amended, and similar independent claims 28 and 45, as amended, which

recite, "generating one or more commands by the similarity search server from the client

request". There is no teaching in Liddy or Stellwagen of generating commands by the

similarity search server from a client request.

Consider the third limitation of applicants' independent claims and the Office citation

of col. 2, lines 37-63 of Liddy, which describes the Liddy invention as a means for

generating alternative representations of queries and documents using natural language

processing, and has the ability to match these alternative representations with database

documents. There is no relevance between this citation and applicants' claims 1, 28

and 45, and there is no teaching of the applicants' third claim limitation in this cited

passage.

Consider the third limitation of applicants' independent claims and the Office citation

of col. 19, line 7 to col. 20, line 67 of Liddy, which describes the Liddy invention as a

means for generating alternative representations of queries and documents using

natural language processing, and has the ability to match these alternative

representations with database documents using Boolean operators. The citation

teaches techniques for locating the positive, negative, disjunction, conjunction and

mandatory aspects using Lexical Clues, Component Ordering and Continuation Clues. There is no relevance between this citation of Liddy and applicants' claims 1, 28 and 45. There is no teaching in this citation of the third limitation of applicants' claims 1, 28 and 45.

Fourth Claim Limitation: Turning to the fourth limitation of applicants' independent claim 1, as amended, and similar independent claims 28 and 45, as amended, which recite, "sending the one or more commands from the similarity search server to the one or more remote database management systems". There is no teaching in Liddy or Stellwagen of sending one or more commands from the similarity search server to the one or more remote database management systems.

Consider the fourth limitation of applicants' independent claims and the Office citation of col. 2, lines 37-63 of Liddy, which describes the Liddy invention as a means for generating alternative representations of queries and documents using natural language processing, and has the ability to match these alternative representations with database documents. There is no relevance between this citation and applicants' claims 1, 28 and 45, and there is no teaching of the applicants' fourth claim limitation in this cited passage.

Consider the fourth limitation of applicants' independent claims and the Office citation of col. 19, line 7 to col. 20, line 67 of Liddy, which describes the Liddy invention as a means for generating alternative representations of queries and documents using natural language processing, and has the ability to match these alternative representations with database documents using Boolean operators. The citation teaches techniques for locating the positive, negative, disjunction, conjunction and

mandatory aspects using Lexical Clues, Component Ordering and Continuation Clues. There is no relevance between this citation of Liddy and applicants' claims 1, 28 and 45. There is no teaching in this citation of the fourth limitation of applicants' claims 1, 28 and 45.

Fifth Claim Limitation: Turning to the fifth limitation of applicants' independent claim 1, as amended, and similar independent claims 28 and 45, as amended, which recite, "executing the one or more commands in the one or more remote database management systems to determine normalized document similarity scores using the persisted user defined functions and configuration files in the remote database management systems". There is no teaching in Liddy or Stellwagen of executing commands in a remote database management system to determine normalized document similarity scores using the persisted user defined functions and configuration files in the one or more remote database management systems.

Consider the fifth limitation of applicants' independent claims and the Office citation of col. 2, lines 37-63 of Liddy, which describes the Liddy invention as a means for generating alternative representations of queries and documents using natural language processing, and has the ability to match these alternative representations with database documents. There is no relevance between this citation and applicants' claims 1, 28 and 45, and there is no teaching of the applicants' fifth claim limitation in this cited passage.

Consider the fifth limitation of applicants' independent claims and the Office citation of col. 19, line 7 to col. 20, line 67 of Liddy, which describes the Liddy invention as a means for generating alternative representations of queries and documents using

natural language processing, and has the ability to match these alternative

representations with database documents using Boolean operators. The citation

teaches techniques for locating the positive, negative, disjunction, conjunction and

mandatory aspects using Lexical Clues, Component Ordering and Continuation Clues.

There is no relevance between this citation of Liddy and applicants' claims 1, 28 and 45.

There is no teaching in this citation of the fifth limitation of applicants' claims 1, 28 and

45.

Sixth Claim Limitation: Turning to the sixth limitation of applicants' independent

claim 1, as amended, and similar independent claims 28 and 45, as amended, which

recite, "determining normalized document similarity scores in the remote database

management systems using choice algorithms, the choice algorithms using weighting

functions applied to results of measure algorithms that determine document leaf node

attribute similarity scores". There is no teaching in Liddy or Stellwagen of determining

normalized document similarity scores in the remote database management systems

using choice algorithms, the choice algorithms using weighting functions applied to

results of measure algorithms that determine document leaf node attribute similarity

scores.

Consider the sixth limitation of applicants' independent claims and the Office citation

of col. 2, lines 37-63 of Liddy, which describes the Liddy invention as a means for

generating alternative representations of queries and documents using natural language

processing, and has the ability to match these alternative representations with database

documents. There is no relevance between this citation and applicants' claims 1, 28

and 45, and there is no teaching of the applicants' sixth claim limitation in this cited passage.

Consider the sixth limitation of applicants' independent claims and the Office citation of col. 19, line 7 to col. 20, line 67 of Liddy, which describes the Liddy invention as a means for generating alternative representations of queries and documents using natural language processing, and has the ability to match these alternative representations with database documents using Boolean operators. The citation teaches techniques for locating the positive, negative, disjunction, conjunction and mandatory aspects using Lexical Clues, Component Ordering and Continuation Clues. There is no relevance between this citation of Liddy and applicants' claims 1, 28 and 45. There is no teaching in this citation of the sixth limitation of applicants' claims 1, 28 and 45.

Seventh Claim Limitation: Turning to the seventh limitation of applicants' independent claim 1, as amended, and similar independent claims 28 and 45, as amended, which recite, "generating a search result by aggregating the similarity scores from the one or more remote database management systems". There is no teaching in Liddy or Stellwagen of generating search results by aggregating similarity scores from the one or more remote database management systems.

Consider the seventh limitation of applicants' independent claims and the Office citation of col. 6, lines 49-58 of Liddy, which describes the a user interface for communicating a query to a server and receiving query results via a network connection. There is no teaching of generating a search result by aggregating similarity scores from one or more remote database management systems. There is no

relevance between this citation and applicants' claims 1, 28 and 45. There is no

teaching of the applicants' seventh claim limitation in this cited passage.

Consider the seventh limitation of applicants' independent claims and the Office

citation of col. 8, lines 10-27 of Liddy, which describes a Matcher 55 that executes a

query by comparing the query representation with a document representation, which are

displayed to a user for possible modification. It should be noted, as described in col. 7,

lines 23-27 of Liddy in relation to a query document matcher 55, "that by the time a user

is entering queries into the system, the relevant document databases will have been

processed and annotated, and various data files and data constructs will have been

established." There is no teaching in applicants' disclosure of pre-processing prior to a

query, as required by the Liddy disclosure. There is no teaching of generating a search

result by aggregating similarity scores from one or more remote database management

systems. There is no relevance between this citation and applicants' claims 1, 28 and

45. There is no teaching of the applicants' seventh claim limitation in this cited

passage.

Concerning the Stellwagen reference, as in the Liddy reference there is no teaching

of applicants' claim limitations in the combination of Liddy and Stellwagen. There is no

teaching of persisting user defined functions for execution of choice algorithms,

weighting functions, measure algorithms and aggregating algorithms in one or more

remote database management systems for determining similarity between an anchor

document and documents in the one or more remote database management systems,

aggregating the search results and returning only the search results to a search server.

In many systems, such as that described in the Liddy reference, it is necessary to send entire documents to a server for processing.

Dependent Claims 2-24, 27, 29-41, 44 and 46-47

Applicants' dependent claims 2-24 and 27 depend on independent 1, applicants dependent claims 29-41 and 44 depend on independent claim 28, and dependent claims 46-47 depend on independent claim 45. These dependent claims incorporate all the limitations of independent claims 1, 28 and 45 upon which they depend while providing further unique and non-obvious recitations. Since the Office has not established a *prima facie* case of obviousness for independent claims 1, 28 and 45, a *prima facie* case of obviousness has also not been established for dependent claims 2-24, 27, 29-41, 44 and 46-47. Since the rejections of claims 1, 28 and 45 are not supported by the Liddy, Stellwagen and Lang references, the rejections of these dependent claims as obvious are also not supported by the Liddy, Stellwagen and Lang references and should be withdrawn. Applicants' request withdrawal of the rejections of these claims, and further examination and allowance of these dependent claims.

In addition, concerning claim 2, there is no teaching in Liddy reference of executing commands in the one or more database management systems that identify a persisted schema for defining search term structure, target search values and designated measure, choice and weight algorithms. Concerning claim 3, there is no teaching in Liddy of executing commands in the one or more database management systems that comprise user defined functions contained within libraries of database management systems for implementing measure algorithms to determine attribute similarity scores, weighting functions and choice algorithms for determining normalized document

similarity scores. Concerning claim 4, there is no teaching in Liddy of executing one or more commands that comprise computing attribute token similarity scores having values of between 0.00 and 1.00 for the corresponding leaf nodes of the anchor document and a search document using designated persisted measure algorithms, multiplying each token similarity score by a designated persisted weighting function, and aggregating the token similarity scores using designated persisted choice algorithms for determining a document similarity score having a normalized value of between 0.00 and 1.00 for the at least one search document. Concerning claim 5, there is no teaching in Liddy of the step of generating a search result that comprises designating a persisted structure to be used by a result dataset, and imposing persisted restrictions on the result dataset. Concerning claim 6, there is no teaching in Liddy of the step of receiving a request that comprises designating measures that override persisted measures for determining attribute token similarity scores, designating choice algorithms that override persisted choice algorithms for aggregating token similarity scores into document similarity scores, and designating weights that override persisted weights to be applied to token similarity scores. Concerning claim 7, there is no teaching in Liddy of generating a search result that further comprises structuring the similarity scores by imposing restrictions on the similarity scores according to a designated persisted user defined function. Concerning claim 8, there is no teaching in Liddy of selecting restrictions from the group consisting of defining a range of similarity scores to be selected and defining a range of percentiles of similarity scores to be selected. Concerning claim 9, there is no teaching in Liddy of generating a search that comprises sorting the similarity scores according to a designated persisted user defined functions.

Concerning claim 16, there is no teaching in Liddy of persisting configuration files for a

similarity search server that comprises persisting configuration files for a gateway, a

virtual document manager and a search manager. Concerning claim 17, there is no

teaching in Liddy of persisting configuration files for the gateway that comprises

persisting a username value, a template value and datasource driver. Concerning claim

18, there is no teaching in Liddy of persisting configuration files for the virtual document

manager that comprises persisting a datatype value, a datasource value, a schema

value, and a datasource driver. Concerning claim 19, there is no teaching in Liddy of

persisting configuration files for the search manager that comprises persisting a

measure value, a choice value, a parser value, a datasource value, a schema value, a

statistic value, and a datasource driver. Concerning claim 20, there is no teaching in

Liddy or Stellwagen of executing the one or more commands in the one or more

database management systems that comprises executing one coalesced search

command to generate all similarity scores of multiple search documents for maximizing

the processing once records have been loaded into memory and minimizing the number

of disk accesses required. Concerning claim 21, there is no teaching in Liddy or

Stellwagen of executing the one or more commands in the one or more database

management systems that comprises executing commands in multiple database

management systems for increased performance, each database management system

containing a partition of a total target database to be searched. Concerning claim 22,

there is no teaching in Liddy or Stellwagen of horizontally partitioning the total target

database to be searched among the multiple database management systems.

Concerning claim 23, there is no teaching in Liddy or Stellwagen of vertically partitioning

the total target database to be searched among the multiple database management systems. Concerning claim 24, there is no teaching in Liddy or Stellwagen of horizontally and vertically partitioning the total target database to be searched among the multiple database management systems.

SUMMARY

As discussed above, the terminal disclaimer and Declaration of Common Ownership found in Appendix A should traverse the double patenting rejection. The rejections of claims 1-47, as amended, under 35 U.S.C. § 103(a) are not supported by the Liddy, Stellwagen and Lang references cited by the Office, as provided in the response above. Reconsideration and further examination are requested.

Applicants have made a diligent effort to place the claims in condition for allowance. However, should there remain unresolved issues that require adverse action, it is requested that the Examiner telephone Douglas D. Russell, Applicants' Attorney at 512-338-4601 so that such issues may be resolved as expeditiously as possible.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,

April 19, 2007	/Douglas D. Russell/
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APPENDIX A

Declaration of Common Ownership

U.S. Patent Application No. 10/653,690 and U.S. Patent No. 6,829,606 (U.S.

Patent Application No. 10/365,828) were, at the time the invention of U.S. Application

No. 10/653,690 was made, owned by or subject to an obligation of assignment to the

same entity, namely Infoglide Software Corporation (formerly Infoglide Corporation) of

Austin, Texas. The corresponding assignment documents for U.S. Patent Application

No. 10/653,690 and U.S. Patent No. 6,829,606 (U.S. Patent Application No.

10/365,828) are recorded in the U.S. Patent Office.

___April 19, 2007___   ___/Douglas D. Russell/___
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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 800716

In re Application of: John R. Ripley, Ram Anantha and Charles Moon

Application No.: 10/653,690

Filed: 09/02/2003

For: Remote Scoring and Aggregating Similarity Search Engine for Use with Relational Databases

The owner*, Infoglide Software Corporation , of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term **prior patent** No. 6,829,606 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:
 expires for failure to pay a maintenance fee;
 is held unenforceable;
 is found invalid by a court of competent jurisdiction;
 is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
 has all claims canceled by a reexamination certificate;
 is reissued; or
 is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

    I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☑ The undersigned is an attorney or agent of record. Reg. No. 40,152

/Douglas D. Russell/	April 19, 2007
Signature	Date

Douglas D. Russell
Typed or printed name

512-338-4601
Telephone Number

☑ Terminal disclaimer fee under 37 CFR 1.20(d) included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

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